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COTTON INSECT CONDITIONS FOR WEEK ENDING AUGUST 31, 1946  
(Fourteenth Cotton Insect Survey Report for 1946)

Boll weevils continue to spread to new fields in the northern area where much late cotton can still be saved by dusting with calcium arsenate to protect green bolls.

The weevils are numerous enough in the southern tier of counties in Tennessee to cause serious damage to fields of late cotton that are not dusted.

The cotton leafworm now occurs in several counties in Tennessee and Missouri. No serious damage has been reported, but every field of young cotton should be kept under observation and arsenical insecticides applied promptly if needed. All owners of young cotton in Arkansas and Mississippi should be prepared to apply arsenical insecticides promptly when the leafworms are found to occur in large numbers.

Leafworms have been found in Mitchell County, Georgia, but reached that State too late to cause any serious damage.

Bollworms are appearing in injurious numbers in many places. Dusting thoroughly and promptly with 5% DDT or with Cryolite or calcium arsenate is recommended.

The calcium arsenate supply has been barely sufficient to meet the demands of the cotton growers throughout the season. There have been numerous local shortages for a few hours or days that have been met by the transfer of insecticide supplies from state to state or from one county to another. Some merchants helped make the supply of calcium arsenate last by not selling all that the farmers wanted, but just enough to meet their immediate needs. In this way the calcium arsenate was rationed. The nicotine supply has been tight throughout the season. Much larger quantities of calcium arsenate would have been used this summer if nicotine had been available, as many growers will not use calcium arsenate if nicotine is not mixed with it or is not available for use, if needed.

BOLL WEEVIL

TEXAS: Most of the cotton has passed the stage for making square infestation records. Weevils are increasing in fields where cotton is still fruiting.

OKLAHOMA: Boll weevil infestations are still spotted and there are a few fields in eastern Oklahoma that have escaped injury, while other fields are reported as completely destroyed. The average infestation in 90 fields where squares were sufficient to make records, in 13 counties, was 33%. The average infestation ranged from 8% in Muskogee County to 61% in Cotton County. Fields free of weevils were found in Muskogee, Okfuskee, Okmulgee, and Wagoner Counties, and

no fields were found in those counties with more than 41% punctured squares. All of the fields examined in Caddo, Canadian, Comanche, Cotton, Creek, Grady, Logan, McIntosh, and Tulsa Counties had boll weevils, and most of them were heavily infested.

ARKANSAS: The boll weevil has caused serious injury to cotton in the southeastern counties. Poisoning has now been discontinued in large areas, releasing supplies of insecticides for the remaining areas where poisoning is required. The average infestations in 48 fields in 6 southeastern counties was 66%. The infestations were from 10 to 25% in 4% of the fields; from 25 to 50% in 25% of the fields; and more than 50% of the squares were punctured in 71% of the fields. In Ashley, Chicot, Desha, Drew, and Lincoln counties in the southeastern part of the State, and Conway and Faulkner Counties in the central part of the State, most of the fields are heavily infested. In Jefferson, Lonoke, St. Francis, and White Counties, in the east-central part of the State, most of the fields are lightly infested or are still free of weevils. No weevils were found in any of the fields examined in Arkansas, Crittenden, Greene, Jackson, Lawrence, Mississippi, and Randolph Counties.

MISSISSIPPI: All of the 5 fields examined in De Soto County in the northwestern corner of the State had weevils, the infestations ranging from 5 to 56% punctured squares. Previous reports indicated that the weevil infestations were high in all parts of the State, except on some farms in De Soto, Tunica, Coahoma, Quitman, Tallahatchie, and Tate Counties in the northwestern part of the State, and most of the cotton fields in those counties probably now have high infestations.

TENNESSEE: Medium to heavy boll weevil infestations have been recorded during the past two weeks in the entire southern tier of counties in Tennessee, touching Alabama and Mississippi - namely, Franklin, Lincoln, Giles, Lawrence, Wayne, Hardin, McNairy, Hardeman, Fayette, and Shelby Counties. In the second tier of counties weevil infestations occur in Chester and Madison Counties adjacent to heavily infested McNairy and Hardin Counties. A year ago at this time 24 of the 133 fields examined were infested with an average of 15% punctured squares in the infested fields, as compared to an average of 29% now in 46 of the 172 fields examined. A year ago all of the infested fields were in the southern tier of counties, while now the weevils have extended into Chester and Madison Counties.

The average infestation of the 172 fields examined in 17 counties was only 8% but the average of the 46 infested fields was 29% punctured squares. In 16 fields less than 10% of the squares were punctured, in 9 fields the infestations ranged between 10% and 25%; in 11 fields they were between 25 and 50%, and 10 fields had more than 50% of the squares punctured. All of the 10 fields examined in McNairy County had infestations ranging from 12 to 88% punctured squares, and in only 3 fields were less than 46% of the squares punctured. In Hardin County all of the 10 fields examined had weevils ranging from 1 to 68% punctured squares, but in only 3 of the fields were more than 50% of the squares punctured. In Hardeman County 2 fields were free of weevils, but the other 9 fields examined had weevil infestations ranging from 3 to 74% punctured squares. In Chester County, 2 fields were free of weevils, in 5 fields less than 6% of the squares were punctured and the highest infestation was 46% punctured squares. Only 4 of the 11 fields examined in Fayette County had weevils and the highest infestation was 29%. Only 3 of the 10 fields examined in Shelby County had weevils and the highest



infestation was 28%. In Madison County weevils were found in only 2 of the 10 fields examined. One hundred fields were examined in 10 other counties without finding any weevils; that is, 10 fields were examined in each of the 10 counties, Carroll, Crockett, Dyer, Gibson, Haywood, Lake Lauderdale, Obion, Tipton, and Weakley, without finding a punctured square, but this does not mean that the boll weevil may not reach some of those counties before the end of the season.

KENTUCKY: The boll weevil has not yet reached Kentucky this year, as no weevils were found in the examination of 15 fields in Fulton, Hickman, and Carlisle Counties.

ALABAMA: Most cotton in the State is mature. The average infestations in 19 fields in Madison, Jackson, and De Kalb Counties in the northeastern corner of the State was 18%. No weevils were found in one field. In 8 fields the infestation was less than 10%; in 7 fields it was from 10 to 25%; in 2 fields it was from 25 to 50%; and in one field more than 50% of the squares were punctured.

GEORGIA: Practically all cotton in the State is mature and a large percentage of it is open in the lower and middle Piedmont areas. The average weevil infestation in 109 fields in 34 northern counties was 58%. No weevils were found in one field in Gilmer County; in 10 fields the infestation was less than 10%; in 26 fields it was from 10 to 30%; in 16 fields it was from 30 to 50%; and in 56 fields more than 50% of the squares were punctured. In Bibb, Greene, Jones, Putnam, and Taliaferro Counties many of the fields had been dusted with calcium arsenate and the boll weevil infestations were not high.

VIRGINIA: F. C. Moore, County Agent, Nansmond County, reported on August 31 the examination of 3 cotton fields. One was free of weevils and the others had 4% and 7% punctured squares.

#### COTTON LEAFWORM

ARIZONA: Leafworms were found in Pima County near Sahuarita, August 27. In Graham County, previously reported infested, worm populations remain low.

TEXAS: The cotton leafworm is general throughout the State and growers continue to dust young cotton.

OKLAHOMA: Dusting for the control of leafworms is general throughout the State. The supplies of calcium arsenate thus far have been adequate.

MISSOURI: George D. Jones, Extension Entomologist, reported on September 2 that leafworm moths were very numerous in Dunklin County and that considerable calcium arsenate had already been distributed to the growers. Previously the cotton leafworms have been reported in Butler, Scott, and Pemiscot Counties. Although four counties are now infested, no serious leafworm damage has as yet been reported in Missouri.

TENNESSEE: W. W. Stanley, Associate Entomologist of the Tennessee Agricultural Experiment Station, reported on August 31 that H. B. Jones, Cotton Gin Specialist of the Extension Service, had observed light infestations of cotton leafworms in the western part of the State. E. W. Dunnam, of this Bureau, had previously found light infestations six miles north of Humboldt in Gibson County, and near Mc Kenzie in Carroll County.

MISSISSIPPI: "Ragging" of cotton by leafworms was observed in the northern part of Bolivar County, and leafworm infestations were reported from Tunica County.

GEORGIA: Leafworms were collected August 27 near Camilla in Mitchell County, in the southwestern part of the State. The worms were causing some ragging of the plants in spots where the plants had made a rank growth. Much of the cotton in the State is now mature and general control measures will not be necessary, but late cotton may still need protection.

#### BOLLWORM

TEXAS: Bollworms continue to attack cotton, which is making new growth. Eggs and numerous young larvae were observed in several cotton fields near Waco, which have been stripped of all early fruit and are now trying to set a new crop.

OKLAHOMA: Bollworm injury is still serious in some fields of rank cotton. Showers and cooler weather the past week was favorable for bollworm development.

ARKANSAS: Bollworms continue to cause serious injury to cotton in the southeastern part of the State.

MISSISSIPPI: The bollworm is apparently causing more damage to cotton in the Delta section of the State than in any recent year. Many calls for recommended control measures have been received. Dusting thoroughly and promptly with 5% DDT or with cryolite or calcium arsenate is recommended.

#### THE COTTON APHID

The shortage of nicotine has emphasized the importance of the cotton aphid as a serious pest of cotton. During the week aphids caused serious damage to cotton in southeastern Arkansas and in the Mississippi Delta. Near Waco, Texas they were reported as abundant in a few fields, but their numbers have been decreased by disease and parasites from some fields. Aphids were noted in 28 of the 172 fields examined in Tennessee, in 8 of the 15 fields examined in Kentucky. They were also reported from Georgia, South Carolina and Arizona and are probably causing damage in all of the cotton growing states.

#### INSECTS OF IRRIGATED COTTON IN SOUTHWEST

ARIZONA: Hemipterous insect populations decreased but stink bugs continue to cause damage in some areas. Many fields are still being poisoned to protect the top crop of bolls.

NEW MEXICO: Sweepings made in 15 fields in the Mesilla Valley show hemipterous insect populations to range from 0 to 3 per 100 net strokes. In the Pecos Valley all injurious species remain low in numbers.

September 4, 1946

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